CONSTIPATION & PARKINSON'S DISEASE

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Constipation is a problem that affects many individuals who have Parkinson's disease (PD). In PD there is a slowing of gastric and bowel motility. A lack of physical exercise or activity, poor dietary habits, decreased fluid intake, as well as a number of medications can also contribute. It is important to understand how to treat this problem.

Causes of Constipation

PD can cause damage to the part of the nervous system called the autonomic nervous system, which regulates the involuntary muscle movement of the intestinal tract. Damage to the autonomic nervous system causes slowed digestion and movement through the intestinal tract.

Exercise and Physical Activity

PD patients can benefit in numerous ways from physical activity and exercise in general, and from exercises like aerobic activity, strengthening exercises and range-of-motion stretching. Physical therapists are extremely helpful in showing you which exercises will be most beneficial and safe for your situation. Consult with both your physician and physical therapist before beginning any new exercise routine. Daily exercise may be beneficial in addition to adequate rest and relaxation.

Dietary Habits

It is important to eat the proper number of servings of each food group daily. A general guide is:

- 2-3 servings of meat
- 4-5 servings of fruit and vegetables
- 2-3 servings of dairy products
- 6-11 servings of whole-grain/bran bread and/or cereal
Excessive amounts of the following foods may cause constipation:

- **Dairy products** (milk, buttermilk, ice cream, cheese, yogurt, sour cream)
- **Highly processed foods** (white flour, bread, crackers, pastries, pasta, white rice)
- **Fast food and junk food**
- **Fried foods**
- **Meats**
- **Bananas**
- **Food high in sugar**
  (chocolate, gelatin with sugar)

**Fiber Content.** The most common cause of constipation is a fiber-poor diet. Fiber is an essential component of a healthy diet and is often overlooked. Some fiber sources include fresh and dried fruits, vegetables, beans, whole-wheat and whole-grain products, bran, oatmeal, and brown rice. After calculating your daily fiber intake, increase it weekly by 5 grams per day until you reach the recommended daily intake of 20 to 35 grams. High-fiber foods are listed in Table 1. The amount of fiber contained in other foods can be found on food labels or by Web site searches using the key words "Dietary Fiber." Drinking enough water is important to prevent constipation, especially when consuming fiber supplements. Six to eight 8-ounce glasses of water is recommended.

**Table 1: Fiber Content of Some Common Foods**

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving Size</th>
<th>Grams of Fiber Per Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheerios™</td>
<td>1 cup</td>
<td>3</td>
</tr>
<tr>
<td>All-Bran*</td>
<td>1/3 cup</td>
<td>8.5</td>
</tr>
<tr>
<td>Apple</td>
<td>1 medium</td>
<td>3.5</td>
</tr>
<tr>
<td>Prunes</td>
<td>3 Prunes</td>
<td>3.0</td>
</tr>
<tr>
<td>String beans (cooked)</td>
<td>1/2 cup</td>
<td>1.6</td>
</tr>
<tr>
<td>Broccoli (cooked)</td>
<td>1/2 cup</td>
<td>2.2</td>
</tr>
<tr>
<td>Kidney beans (cooked)</td>
<td>1/2 cup</td>
<td>7.3</td>
</tr>
<tr>
<td>Lentils (cooked)</td>
<td>1/2 cup</td>
<td>3.7</td>
</tr>
<tr>
<td>Bran muffin</td>
<td>1 muffin</td>
<td>2.5</td>
</tr>
<tr>
<td>Whole-wheat bread</td>
<td>1 slice</td>
<td>1.3</td>
</tr>
<tr>
<td>Brown rice</td>
<td>1/2 cup</td>
<td>1.0</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>1/2 medium</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Medication**

Certain medications can also cause constipation. Numerous medications have been identified with constipation, however, the best way to determine if a drug is the cause of your constipation is if the symptom coincides with the introduction of a new medication. Table 2 lists examples of medications that can cause or worsen constipation. Do not stop these medications, but ask your doctor if there are alternatives.
## Table 2: Medications That Can Cause or Worsen Constipation

<table>
<thead>
<tr>
<th>Medications Class</th>
<th>Examples - Generic Name (Brand)</th>
</tr>
</thead>
</table>
| PD medications                                 | • trihexyphenidyl (Artane®)  
• benztrpine (Cogentin®)                                                                              |
| Narcotic pain medications                      | • oxycodone (Percocet®, Percodan®, Oxycontin®)  
• hydrocodone (Lortab®, Vicodin®, Vicoprofen®, many prescription-only cough syrups)  
• hydromorphone (Dilaudid®)  
• propoxyphene (Darvocet®, Darvon®)  
• fentanyl (Actiq®, Duragesic®, Fentora®)  
• meperidine (Demerol®)  
• codeine  
• morphine                                                                                 |
| Antacids                                        | • aluminum-containing products  
• bismuth-containing products (Pepto-Bismol®)  
• calcium-containing products (Rolaids®, Tums®)                                                   |
| Calcium supplements                             | • Os-Cal®, Caltrate®, Citracal®, Viactiv®  
• generics/store-brands  
• prescription calcium products                                                                  |
| Antihistamines (used for sleep aid, allergies, and motion sickness)                             | • diphenhydramine (Benadryl®)  
• meclizine (Dramamine®)  
• chlorpheniramine (Chlor-Trimeton®)                                                               |
| Antidepressants                                 | • amitriptyline (Elavil®)  
• desipramine (Norpramin®)  
• nortriptyline (Pamelor®)                                                                        |
| Antipsychotics                                  | • waloperidol (Haldol®)  
• clozapine (Clozaril®)  
• risperidone (Risperdal®)                                                                       |
| Cholesterol medications                        | • cholestryramine (Prevalite®, Questran®)                                                      |
| High blood pressure medications                 | • verapamil (Calan®, Verelan®)  
• dilitiazem (Cardizem®, Cartia XT™)  
• clonidine (Catapres®)  
• methyldopa                                                                                      |
| Seizure/epilepsy medications                    | • phenytoin (Dilantin®)  
• valproic acid (Depakote®)                                                                       |
| Iron supplements                                | • Feosol®, Slow-Fe®  
• generics/store-brands  
• prescription iron products                                                                     |

### Change In Lifestyle

The safest and healthiest way correct abnormal bowel function is to first change your diet and lifestyle. It may take some time before these changes take effect and restore regularity, so be patient. Here are some suggestions:
• Eat meals at the same time each day
• Add more fiber to your diet
• Exercise and remain as active as possible
• Drink warm liquids with breakfast
• Establish a fixed time every day for bowel movements
• Never put off the urge to move your bowels.

**Medication Management**

**Over the Counter (OTC) Medications.** If after two weeks of dietary/lifestyle changes there is no improvement in regularity, bulk-forming laxatives may be used. It is important to continue your healthy eating habits while taking these laxatives. Stool softeners may also be added if the bulk-forming laxatives do not provide relief soon enough, and to help relieve straining during bowel movements. Both items are generally safe when used as directed. Stimulant laxatives and hyperosmotic laxatives may not always be safe and SHOULD NOT be used without the advice of a physician or pharmacist. If, after dietary/lifestyle changes and using a laxative fails, a more serious underlying condition may be responsible for the constipation.

Various types of medications used to treat constipation, along with a description of how they work, are listed in **Table 3.** There are many other available products not listed here, and if you have questions about ingredients or if the product is safe to use, ask your physician or pharmacist.

**Bulk-forming Laxatives.** Bulk-forming laxatives or fiber supplements are the safest and most naturally-acting type of laxative provided they are taken as directed. These fiber laxatives absorb liquid in the intestines to soften the stool. The bowel is then stimulated naturally by the bulky mass. These products are not habit-forming and can be used daily to help prevent and treat constipation. Not drinking enough water can result in an obstruction of the gastrointestinal tract. Increasing fiber intake too quickly may result in gas, bloating, and upset stomach. These products usually take between 12 to 72 hours to work. A physician should be consulted if the use of these products does not resolve constipation after two weeks. These bulk fibers may affect how well other medications work, so whenever possible, take at least two hours before taking any other medications.

**Stool Softeners.** Stool softeners, also called emollients, are oral products containing the ingredient docosuate and are generally useful only in preventing constipation. They work by allowing liquids to mix with the stool. Stool softeners do not cause a bowel movement, but help to allow one without straining. They are not habit-forming and usually work in one to two days, but can take up to five days. If constipation is not resolved after one week, do not continue to use a stool softener without consulting your physician. Do not take stool softeners if you are taking digoxin (Digitek®) or warfarin (Coumadin®).

**Stimulant Laxatives.** Use stimulant laxatives only with your physician's advice. These oral tables or capsules contain senna, bisacodyl, casanthranol, cascara, sagrada, castor oil, aloe or dehydrocholic acid. Casanthranol, cascara sagrada and aloe are not FDA-approved. Stimulant laxatives increase muscle contraction in the intestinal wall and usually take about six to 12 hours to work. They are habit-forming and long-term use can even harm the bowel.
• **Saline Laxatives.** Saline laxatives contain magnesium hydroxide, magnesium citrate, magnesium sulfate, and sodium phosphate. One way they act is by drawing water into the intestine and bowel from other body tissues, causing a watery bowel movement usually within six to eight hours. They should be used only by a physician's direction because they may be harmful to people with certain heart or kidney problems. They are used for rapid emptying of the bowel and are **NOT** to be used long-term. They are available as oral preparations or enemas.

• **Hyperosmotic Laxatives.** Glycerin is the primary example of a hyperosmotic laxative. It is available in suppositories, and usually produces a bowel movement within 30 to 60 minutes. Like saline laxatives, they act by drawing water into the bowel causing a movement. These medications are relatively safe when used under a physician's direction.

• **Combination Products.** There are a number of OTC products available that contain various combinations of different types of laxatives, and should be taken only when directed by your physician.

• **Miscellaneous.** Cod liver oil is a miscellaneous dietary supplement that may help relieve constipation. It is high in vitamins A and D and is safe to use regularly.

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**Table 3: Over the Counter Medications used to Treat Constipation**

<table>
<thead>
<tr>
<th>Medications Class</th>
<th>Examples - Generic Name (Brand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk forming laxatives</td>
<td>• psyllium (Metamucil, Fiberall, Konsyl†)</td>
</tr>
<tr>
<td></td>
<td>• inulin (Fibersure, Fiber Choice)</td>
</tr>
<tr>
<td></td>
<td>• polycarbophil (Fibercon, Fiber-Lax)</td>
</tr>
<tr>
<td></td>
<td>• methylcellulose (Citruce1)</td>
</tr>
<tr>
<td></td>
<td>• microcrystalline cellulose &amp; guar gum (Benefiber)</td>
</tr>
<tr>
<td>Stool softeners</td>
<td>• docusate (Colace, Correctol)</td>
</tr>
<tr>
<td>Stimulant Laxatives</td>
<td>• bisacodyl (Dulcolax, Correctol, Fleet, Magic Bullet)</td>
</tr>
<tr>
<td></td>
<td>• castor oil (Castor oil, USP)</td>
</tr>
<tr>
<td></td>
<td>• senna (Ex-Lax, Senokot, Black Driag)</td>
</tr>
<tr>
<td>Saline Laxatives</td>
<td>• magnesium citrate (Citroma)</td>
</tr>
<tr>
<td></td>
<td>• sodium phosphate (Fleet Phospho-Soda, Fleet ready-to-use Enema)</td>
</tr>
<tr>
<td></td>
<td>• magnesium hydroxide (Milk of Magnesia products, Maalox, Mylanta)</td>
</tr>
<tr>
<td></td>
<td>• magnesium sulfate (Epsom salts)</td>
</tr>
<tr>
<td>Hyperosmotic</td>
<td>• glycerin Suppositories</td>
</tr>
<tr>
<td></td>
<td>• polyethylene glycol (Miralax)</td>
</tr>
<tr>
<td>Lubricant laxative</td>
<td>• liquid petrolatum (Mineral oil, USP, Fleet ready-to-use Mineral oil Enema)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>• cod liver oil (Cod liver oil)</td>
</tr>
<tr>
<td>Combination products</td>
<td></td>
</tr>
<tr>
<td>Stimulants plus stool softeners</td>
<td>• senna + docusate (peri-Colace, Senokot S)</td>
</tr>
<tr>
<td>Hyperosmotic laxative plus lubricant</td>
<td>• magnesium hydroxide + mineral oil (Phillip's MO Suspension)</td>
</tr>
</tbody>
</table>
Prescription Medication

If other products fail, discuss with your doctor or pharmacist about a prescription medication that may be available to treat chronic constipation in people with Parkinson’s.

Conclusion

Always make certain all of your physicians and your pharmacist are aware of all the medications (OTC and prescription), vitamins, supplements, and herbal products you are taking so they can check for drug interactions or side effects. Whenever adding a new OTC or prescription product to your medication regimen, ask about potential drug interactions and side effects that you should look for. Finally, when purchasing OTC products, always check the ingredients. Many brands make products with similar names that may contain different combinations of drugs. If you are not certain, ask your pharmacist. Contact your physician if you encounter new symptoms (i.e. blood in the stool, unusual abdominal pain, and unexplained weight loss), as you may have an underlying condition causing constipation.

The information contained in this supplement is solely for the information of the reader and should not be used for treatment purposes, but rather as a source for discussion with the patient's health provider.

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